LISTING OF CLAIMS

Please amend claims 1, 19, and 27. Please add claims 37-40. This listing of claims, if entered, replaces all prior versions of the claims.

1. (Currently Amended) A method, comprising:

accessing data representing an interconnect model, wherein the interconnect model includes a driving point node, and wherein the interconnect model is not a lumped capacitance model;

calculating an effective capacitance of the interconnect model to be inversely proportional to a voltage at the driving point node of the interconnect model, wherein

the calculating the effective capacitance of the interconnect model comprises scaling one or more capacitances by a ratio of a voltage across the one or more capacitances to the voltage at the driving point node; and

storing a value representing the effective capacitance.

2. (Original) The method of claim 1, wherein

said calculating calculates the effective capacitance to be directly proportional to a sum of one or more products, wherein each of the one or more products equals a product of a respective one of one or more capacitances included in the interconnect model and a voltage across the respective one of the one or more capacitances.

3. (Original) The method of claim 1, wherein

said accessing further comprises accessing data representing a driver model; and

said calculating comprises calculating the effective capacitance as a function of a resistance included in the driver model.

4. (Original) The method of claim 1, wherein

said calculating is performed without using numerical techniques.

5. (Original) The method of claim 1, wherein
the interconnect model is a pi model.

6. (Original) The method of claim 5, further comprising:
calculating a plurality of time constants from a plurality of capacitances and a resistance included in the pi model and from a resistance included in a driver model of a driver coupled to an interconnect modeled by the interconnect model; and
using the plurality of time constants to perform said calculating the effective capacitance.

7. (Original) The method of claim 1, wherein:
the interconnect model includes one or more inductances.

8. (Original) The method of claim 1, wherein:
said calculating the value of the effective capacitance is performed according to a closed form algorithm.

9. (Original) The method of claim 1, wherein
said storing comprises storing the effective capacitance value in a lookup table.

10. (Original) The method of claim 9, further comprising:
repeating said calculating and said storing for each of a plurality of different values of the one or more capacitances in the interconnect model.

11-18. (Canceled)

19. (Currently Amended) A system, comprising a processor and a memory storing program instructions executable by the processor to:
access data representing an interconnect model, wherein the interconnect model includes a driving point node, and wherein the interconnect model is not a lumped capacitance model;
calculate an effective capacitance of the interconnect model to be inversely proportional to a voltage at the driving point node of the interconnect model, wherein

calculating the effective capacitance of the interconnect model comprises scaling one or more capacitances by a ratio of a voltage across the one or more capacitances to the voltage at the driving point node; and

store a value representing the effective capacitance.

20. (Original) The system of claim 19, wherein the program instructions are executable by the processor to:

calculate the effective capacitance to be directly proportional to a sum of one or more products, wherein each of the one or more products equals a product of a respective one of one or more capacitances included in the interconnect model and a voltage across the respective one of the one or more capacitances.

21. (Original) The system of claim 19, wherein the program instructions are executable by the processor to:

access data representing a driver model; and

calculate the effective capacitance as a function of a resistance included in the driver model.

22. (Original) The system of claim 19, wherein the program instructions are executable by the processor to:

calculate the effective capacitance without using numerical techniques.

23. (Original) The system of claim 19, wherein

the interconnect model is a pi model.

24. (Original) The system of claim 19, wherein:

the interconnect model includes one or more inductances.

25. (Original) The system of claim 19, wherein the program instructions are executable by the processor to:

calculate the effective capacitance according to a closed form algorithm.

26. (Original) The system of claim 19, wherein the program instructions are executable by the processor to:

store the value representing the effective capacitance in a lookup table.

27. (Currently Amended) A computer readable medium, comprising program instructions executable to:

access data representing an interconnect model, wherein the interconnect model includes a driving point node, and wherein the interconnect model is not a lumped capacitance model;

calculate an effective capacitance of the interconnect model to be inversely proportional to a voltage at the driving point node of the interconnect model, wherein calculating the effective capacitance of the interconnect model comprises scaling one or more capacitances by a ratio of a voltage across the one or more capacitances to the voltage at the driving point node; and

store a value representing the effective capacitance.

28. (Original) The computer readable medium of claim 27, wherein the program instructions are executable to:

calculate the effective capacitance to be directly proportional to a sum of one or more products, wherein each of the one or more products equals a product of a respective one of one or more capacitances included in the interconnect model and a voltage across the respective one of the one or more capacitances.

29. (Original) The computer readable medium of claim 27, wherein the program instructions are executable to:

access data representing a driver model; and

calculate the effective capacitance as a function of a resistance included in the driver model.

30. (Original) The computer readable medium of claim 27, wherein the program instructions are executable to:

calculate the effective capacitance without using numerical techniques.

31. (Original) The computer readable medium of claim 27, wherein
the interconnect model is a pi model.

32. (Original) The computer readable medium of claim 27, wherein:
the interconnect model includes one or more inductances.

33. (Original) The computer readable medium of claim 27, wherein the program instructions are executable to:
calculate the effective capacitance according to a closed form algorithm.

34. (Original) The computer readable medium of claim 27, wherein the program instructions are executable to:
store the value representing the effective capacitance in a lookup table.

35-36. (Canceled)

37. (New) The method of claim 1, wherein
the scaling the one or more capacitances comprises:
scaling a first capacitance included in the interconnect model by a ratio of a voltage across the first capacitance to the voltage at the driving point node, wherein
the scaling the first capacitance produces a first scaled capacitance;
scaling a second capacitance included in the interconnect model by a ratio of a voltage across the second capacitance to the voltage at the driving point node, wherein
the scaling the second capacitance produces a second scaled capacitance; and
the calculating the effective capacitance comprises:
summing the first scaled capacitance and the second scaled capacitance to produce an effective capacitance value.

38. (New) The method of claim 37, further comprising:

calculating a plurality of time constants from the first capacitance and the second capacitance; and

using the plurality of time constants to perform said scaling the first capacitance, said scaling the second capacitance, and said summing.

39. (New) The method of claim 1, wherein

the scaling the one or more capacitances comprises:

multiplying each one of the one or more capacitances by a respective voltage across that one of the one or more capacitances to generate a respective one of one or more first products; and

dividing each one of the one or more first products by the voltage at the driving point node to produce a respective one of one or more second products; and

the calculating the effective capacitance comprises summing the one or more second products to produce an effective capacitance value.

40. (New) The method of claim 1, wherein the scaling the one or more capacitances comprises:

multiplying each one of the one or more capacitances by a respective voltage across that one of the one or more capacitances to generate a respective one of one or more first products;

summing the one or more first products to produce a first value; and

dividing the first value by the voltage at the driving point node to produce an effective capacitance value.